

JET Meeting Minutes

May 19, 2015

Participants

Grover Browning	Internet2	Gcbrowni@iu.edu
Nick Buraglio	ESnet	buraglio@es.net
Rich Carlson	DOE/SC	Richard.carlson@science.doe.gov
Bobby Cates	NASA/Ames	bcates@mail.arc.nasa.gov
Vince Dattoria	DOE/SC	vince.dattoria@science.doe.gov
Dave Diller	MAX	dave@maxgigapop.net
Mark Foster	NASA/Ames	mark.foster@nasa.gov
Andy Germain	NASA/GSFC	Andrew.M.Germain@nasa.gov
Mike Gill	NIH/NLM	gill@nlm.nih.gov
JJ Jamison	Juniper	jj@juniper.net
Mark Johnson	MCNC	mj@mcnc.org
Kevin Kranacs	NASA	kevin.m.kranacs@nasa.gov
Michael Lambert	3ROX	lambert@psc.edu
Michael Laufer	NOAA	michael.laufer@noaa.gov
Paul Love	NCO	epl@sover.net
Grant Miller	NCO	miller@nitrd.gov
Glenn Ricart	US Ignite	glenn.ricart@us-ignite.org
Kevin Thompson	NSF	kthompso@nsf.gov
George Uhl	NASA/GSFC	george.d.uhl@nasa.gov

Action Items

1. If you expect to need SCinet WAN circuits for SC2015 get your circuit request into SCinet before the end of the month. Contact info: WAN-team@scinet.supercomputing.org
2. JET members should contact Grover Browning: Gcbrowni@iu.edu with their ideas for identifying and resolving soft network failures.

Proceedings

This meeting of the JET was chaired by Vince Dattoria of DOE and Kevin Thompson of the NSF.

Network Roundtable

Internet2: Grover Browning

Internet2 is installing new Layer 2 nodes in Louisville, Cincinnati, Reno, and Las Vegas. They should all be operational by the end of June.

NASA networking: Bobby Cates

NASA had its annual DHS TIC audit last month. The results are due in 3-4 weeks. NASA's internal network/external network core router symmetry is in the process of being configured. NASA's external border protection project is working in conjunction with the core router symmetry project. All are expected to be completed by the end of the CY.

NIH/NLM: Mike Gill

No update

MAX: Dave Diller

MAX is installing new cards for their DWDM migration to implement 100G. Ashburn connectivity is due to be completed this summer.

Exchange Points Roundtable**Ames: Bobby Cates**

Ames is implementing new PS units and generators for power. All Ames equipment is diversely supplied for power so they anticipate no disruptions of service.

3ROX: Michael Lambert

3ROX is implementing perfSONAR to test its infrastructure. University of Pittsburgh is turning up a 100G link to 3 ROX soon. Their Science DMZ remains to be finished.

MAN LAN & WIX: Grover Browning

Nothing new to report

StarLight: Joe Mambretti (via email)

The StarLight consortium is planning to implement a new core switch for international circuits, a Juniper EX 9802. The StarLight consortium is also preparing to stage demonstrations at the GENI Engineering Conference (GEC 23) at UIUC, at the CVS in Ottawa, at the TERENA Networking Conference (TNC) in Porto Portugal, at the GLIF annual meeting in Prague, Czech Republic, and at SC15 in Austin Texas. The StarLight consortium has begun to plan to implement a state of the art international SDX, which has been funded under the National Science Foundation's International Research Network Connections (IRNC) program. An overview of this international SDX project was presented at an NSF IRNC kick-off meeting on April 26 in Washington DC

Internet2 Soft Equipment Failures: Grover Browning, et al

Internet2 experienced soft failures in the last month surrounding Brocade fabric at MAN LAN in New York, a Juniper Layer 3 box in Chicago, and a Brocade line card in McLean. The failures occurred without logs, counters, or failure notices on the nodes in question; the only alerts being “symptoms” reported through the Internet2 perfSONAR mesh. NASA/GSFC experienced a soft failure resulting in the loss of Earth Observation Satellite data. In this instance a NIC card was replaced in the Brocade/McLean switch and the problem disappeared. Internet2 was unsure if moving NASA to a different port would have affected a resolution. A Juniper router in Chicago threw away packets without any indication of a disruption in service. There was insufficient perfSONAR data to indicate the specific problem. If you can’t identify where service was interrupted or what the specific failure is, a fix of the problem is random. If there is a service turndown on a link to resolve such an outage, the link failover to the backup service may

well resolve the outage but you don't know how that turndown will affect other customers.

Internet2 would like community feedback to identify who is resilient and who is not. They could run perfSONAR to look for a problem but they don't routinely alert on the edge/customer ports via perfSONAR now, only the L2 and L3 backbone links. Can the community discuss implementing more ubiquitous perfSONAR to provide the needed information to isolate and resolve failures? Or would the community prefer an approach to hard fail circuits to implement the backup services? Discussion identified that NASA (George Uhl) used perfSONAR to identify the location/equipment that failed. Customers need an alerting mechanism to let potential affected customers know when a failure has occurred so they can adapt to the failure.

AI: JET members should contact Grover Browning: Gcbrowni@iu.edu with their ideas for identifying and resolving soft network failures.

SDI Workshop

The Software Defined Infrastructure (SDI) Workshop is still being planned for July 14-16 at Berkeley Labs, California. The objective is to develop a roadmap for the next three years to develop and demonstrate Layer 2 and 3 SDI domain interoperability. A Dear Colleague letter, a full agenda, a website, and a registration link should be available shortly.

LSN Tasking

LSN tasked the JET with:

- Continuing the Big Data demonstrations for SC15: The JET Big Data teleconferences are addressing this task
- Tracking technologies: SDN, IPv6, TICs, perfSONAR: Grant Miller will arrange for DHS to discuss TIC requirements with the JET and the JET will have an IPv6 review at an upcoming JET meeting
- Continue Co-Located meetings with Internet2/ESnet: The joint meetings are being held
- Hold a follow-on SDN Workshop: The July 14-16 SDI workshop is in-progress. An SDN workshop is also planned for October 2015.
- Emerging Technology Coordination: Teleconferences and meetings are held approximately monthly.

Emerging Technology Coordination (ETC) forum

The ETC forum met at the Internet2 Global Summit. A lively discussion focused on demonstrating an SDI Interdomain management capability to define, identify, and manage SDI resources. An urgent need was identified for a common format for describing resources so they could be identified and managed across domains.

Meetings of Interest:

June 1 [Global Cities Team Challenge](#), National Building Museum, Washington, DC

June 1-3 [NANOG64](#), San Francisco, CA

June 15-18	TNC2015 , Porto, Portugal
June 15-18	GEC23 , Urbana Champaign, IL
July 14-16	SDI next steps planning and coordination , Berkeley, CA
July 19-24	IETF93 , Prague, Czech Republic
August 10-14	APAN40 , Kuala Lumpur, Malaysia
September 21-23	CANS2015 , Chengdu, China
September 28-30	ESCC , Austin, TX
Sep 29-Oct 1	Global Lambda Grid Workshop , Prague, Czech Republic
October 4-7	Technology Exchange , Cleveland, OH
October 5-7	NANOG65 , Montreal, QC, Canada
October 8-9	ARIN 36 , Montreal, QC, Canada
November 1-6	IETF94 , Yokohama, Japan
November 15-20	SC15 , Austin, TX

Next JET Meetings:

June 16	11:00-2:00, NSF
July 14	11:00-2:00, NSF
Nov 17	1:30-3:30 CDT, Austin Convention Center, Austin TX

nb: This is concurrent with SC15.